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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,738	07/31/2003	Mi Sook Nam	8733.444.10-US	1411
30827	7590	02/16/2006	EXAMINER	
MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006			HON, SOW FUN	
			ART UNIT	PAPER NUMBER
			1772	

DATE MAILED: 02/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/630,738

Applicant(s)

NAM, MI SOOK

Examiner

Sow-Fun Hon

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Request for Reconsideration*

#### *Withdrawn Rejections*

1. The 35 U.S.C. 102(b) rejections using Shiga and Gandini, paragraphs 5-6 in the Office action dated 09/20/05, have been withdrawn due to Applicant's statement, in the remarks section dated 12/16/05, that Applicant's polymer main chain does not contain any portion which is similar to the drawn out polymers of Shiga and Gandini.

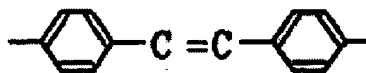
#### *Rejections Repeated*

2. The 35 U.S.C. 102(a) rejections as being anticipated by Yamamoto and Tomioka, have been repeated for the same reasons previously of record in the Office action dated 09/20/05.

#### *Response to Arguments*

3. Applicant's arguments regarding the validity of Yamamoto and Tomioka as prior art, filed 12/16/05, have been fully considered but they are not persuasive.

4. Applicant argues that formula (IX) in Yamamoto, shown on the next page, does not correspond to species A of Applicant shown below.





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Applicant is respectfully apprised that chemical formula (3) of Tomioka is a stilbene diamine, which along with 4,4'-diaminodiphenylmethane, is reacted in an equal mole ratio with pyromellitic acid anhydride to form a polyamic acid (column 18, lines 35-50), which would look like the representation shown below:

$$\text{-OCHOOC-ArCOOH-CO-NH-[-Ar-CH=CH-Ar-]}_a\text{[NH-CO-HOOC-ArCOOH-CONH]}_b\text{[Ar-CH}_2\text{-Ar-]}_c\text{-NH-}$$
;  $a > 0$ ,  $b > 0$ ,  $c > 0$ . Therefore, while the polymer of Tomioka does not look like the polymer of Applicant in the case of  $b=c=0$ , it does look like the polymer of Applicant in the case of  $a > 0$ ,  $b > 0$ ,  $c > 0$ .

7. Applicant argues that Tomioka merely discloses that the polyamic acid is used in preparation of the liquid crystal composition.

Applicant is respectfully apprised that Tomioka teaches that the polyamic acid is used as an alignment layer (column 18, lines 34-35), specifically a photo-alignment layer (polarized light, column 18, lines 50-56).

8. Applicant argues that chemical formula (3) of Tomioka does not contain any  $\text{-NHCO-}$  group.

Applicant is respectfully apprised that the polyamic acid is formed from the stilbene diamine (formula 3 of Tomioka) and 4,4'-diaminodiphenylmethane reacted in equal mole ratio with pyromellitic acid anhydride (column 18, lines 35-50), in a polycondensation reaction which forms the  $\text{-NHCO-}$  linkages between the amine and acid anhydride components. See US 4,416,73 as a teaching reference.

***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*S. Hon*

Sow-Fun Hon

*02/13/06*

*[Signature]*  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
*1772*

*2/14/06*